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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,172	08/17/2001	Gerard Delahay	58779.000018	1446

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EXAMINER

STRICKLAND, JONAS N

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,172

Applicant(s)

DELAHAY ET AL.

Examiner

Jonas N. Strickland

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6/05/03. 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Detailed Action is in response to the amendment filed on 1/26/04. Claims 1-9 are currently pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 6/5/03 has been considered by the Examiner. The Examiner has also considered the non-patent literature documents by Higgins and Meier et al.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Speronello et al. (US Patent 5,516,497).

Speronello et al. discloses a zeolite catalyst having an iron or copper promoter loading which is useful for reducing nitrogen oxides. Speronello et al. provides for introducing ammonia into a gas stream from about 0.7 to 2 moles of ammonia per mole of nitrogen oxides. The reaction is carried out at a temperature of from 200°C to 600°C (col. 3, lines 36-41). The gas is comprised of nitrogen oxides, oxygen, as well as water (col. 12, lines 56-63). Speronello et al. continues to teach wherein the iron beta-zeolite

Art Unit: 1754

may also comprise a binder (col. 7, lines 60-62). The Si/Al ratio is significantly less than 30 (col. 7, lines 1-3). The catalyst is comprised of 1 wt% of iron (col. 3, lines 49-51).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speronello et al. (US Patent 5,516,497) in view of Coq et al. (US Patent 6,221,324).

Applicant claims with respect to claims 7-9, wherein the gas circulates at voluminal velocities per hour from 1000 to 50,000 h⁻¹ and the volume content of the gas. The teachings of Speronello et al. have been discussed with respect to claims 1 and 3-6. Speronello et al. teaches wherein a zeolite promoted with either iron or copper may be used in treating nitrogen oxides. Speronello et al. also teaches wherein any suitable zeolite may be utilized in the process for reducing nitrogen oxides. Furthermore, with respect to claim 2, it would have been obvious to one of ordinary skill in the art to achieve the desired ratio of nitrogen oxides, since Speronello et al. discloses wherein nitrogen oxides are present in the gas mixture from about 20 to 500 ppmv (col. 4, lines 59-61). However, Speronello et al. is silent with respect to the limitations of claims 7-9.

Coq et al. teaches a process for the removal of nitrogen oxides with a copper faujasite zeolite (see abstract). Coq et al. continues to disclose wherein the gas circulates at a VVH from 10,000 to 20,000 h^{-1} (col. 7, lines 5-10) and wherein the gas comes from nitric acid plants comprised of 1.5 to 3% of oxygen and 0.3 to 2.5% of water (col. 5, lines 22-30).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Speronello et al., by reducing nitrogen oxides under process conditions, such as circulating a gas at a voluminal velocity per hour from 1000 to 50,000 h^{-1} and the volume content of the oxygen and water in the gas being between 1.5 and 5% and 0.5 and 5% respectively, because Coq et al. teaches a process for the reduction of nitrogen oxides wherein the gas circulates at a VVH from 10,000 to 20,000 h^{-1} and wherein the gas comes from nitric acid plants comprised of 1.5 to 3% of oxygen and 0.3 to 2.5% of water. It would have been obvious to combine the two references, since both references utilize zeolites, which are promoted by metals in order to reduce nitrogen oxides. Furthermore, Speronello et al. teaches wherein any suitable zeolite may be utilized in the process for reducing nitrogen oxides and wherein a zeolite may be promoted with either iron or copper.

Response to Arguments

7. Applicant's arguments filed 1/26/04 have been fully considered but they are not persuasive. Applicant argues that the teachings of Speronello et al. do not teach all of the limitations as recited in claims 1 and 3-6. In particular, claim 1 – upon which claims 3-6 are dependent, recites “a gas comprising NO_x , N_2O , oxygen, and water”. Applicant

Art Unit: 1754

continues to argue that Speronello et al. does not disclose a gas comprising nitrous oxide, but rather methods for destroying nitrogen oxide gases. Applicant finally argues that NO_x should not be construed to include nitrous oxide.

However it is known in the art that nitrous oxide is considered a nitrogen oxides (see US Patent 5,589,147). The Examiner anticipates the nitrogen oxides as disclosed by Speronello et al. to also include nitrous oxide, since it is known in the art that nitrogen oxides may also include nitrous oxide. Furthermore, in response to applicant's arguments, the recitation "from a gas comprising NO_x, N₂O, oxygen and water" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1754

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonas N. Strickland whose telephone number is 571-272-1359. The examiner can normally be reached on M-TH, 7:30-5:00, off 1st Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.



Jonas N. Strickland
March 5, 2004



STANLEY S. SILVERMAN
SUPERVISORY PATENT EXAMINER
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